

Claims of EP0820956

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- 1. Vorrichtung zum Reinigen einer Oberfläche eines umlaufenden flächigen Elements (1), insbesondere einer Rolltreppe oder eines Rollbandes, mit einem Strahlkopf (5), mittels welchem über Druckluft ein Strahlgut, das sich in einem Strahlgutbehälter (4) befindet, auf die Oberfläche (10) des flächigen Elementes aufstrahlbar ist, wodurch die auf der Oberfläche (10) haftenden schmutzpartikel ablösbar sind, mit einer Absaugeinrichtung (6) zum Absaugen des Strahlgutes zusammen mit den abgelösten Schmutzpartikel, und einer Einrichtung zum Trennen der Schmutzpartikel vom wiederverwendbaren Strahlgut, dadurch gekennzeichnet, dass der Strahlkopf (5) an einer Haltevorrichtung (13) gehalten ist, die im wesentlichen quer zur Laufrichtung des flächigen Elementes (1) und von diesem beabstandet fixierbar ist, dass der Strahlkopf (5) entlang der Haltevorrichtung (13) verfahrbar und der Abstand zur Oberfläche (10) des flächigen Elementes (1) einstellbar ist.
 - 2. Apparatus according to claim 1, characterised in that the orbital laminar member as escalator or roll volume (1) formed is, and that the holding device (13) is clampable between the two the lateral limitation of formed wandförmigen parts (17).
 - 3. Apparatus according to claim 2, characterised in that the holding device (13) for clamping between the wandförmigen parts (17) at the ends with suction cups (16) provided is, whereby the distance between each other opposite suction cups (16) is more adjustable.
 - 4. Vorrichtung nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, dass die Haltevorrichtung (13) eine Führungsschiene (18) aufweist, entlang welcher ein Wagen (20) verfahrbar ist, an welchem eine Halterung (24), die mit dem Strahlkopf (5) verbunden ist, befestigt ist, und dass die Halterung (24) mit einer Höhenverstelleinrichtung für den Strahlkopf (5) ausgestattet ist.
 - 5. Apparatus according to claim 4, characterised in that of the carriages (20) with drive means (21, 22, 23) to the method along the guide rail (18) provided is.
 - 6. Vorrichtung after one of the claims 4 or 5, characterised in that the Strahlkopf (5) around a rotation axis (25) rotatable in the support (24) held is, whereby the rotation axis (25) is essentially vertical aligned to the surface (10), which can be cleaned, and that the Strahlkopf (5) is more rotatable over a rotary drive (26).
 - 7. Apparatus after one of the claims 1 to 6, characterised in that the Strahlkopf (5) at its surface (10), which can be cleaned, directed peripheral area with a bürstenförmig formed seal (11) provided is.
 - 8. Vorrichtung after one of the claims 1 to 7, characterised in that a control device (35) provided is, and that are mounted at the Strahlkopf (5) in its edge areas limit switches (32, 33), which is connected with the control device (35) over conduits (34) that at least a sensor (36) at the Strahlkopf (5) is mounted, which is likewise connected over a conduit (37) with the control device (35), with which the cleaning temperature of the surface (10) is more detectable that an other

- sensor (38) is provided, which the presence of the surface (10), which can be cleaned, in Region of the Strahlkopfes (5) determines, and that likewise the drive means (23) and the rotary drive (26) are with the control device (35) connected.
- 9. Vorrichtung after one of the claims 1 to 8, characterised in that the Strahlkopf (5) dreiecksförmig formed is and the jet nozzle (27) in machine direction of the laminar members (1) seen in the front tip of the triangle arranged is.
- 10. Method cleaning a surface (10) of a laminar element (1) with an apparatus after one of the claims 1 to 9, characterized thus that the holding device (13) fixed becomes that the laminar members (1) are led past in movement offset and the Strahlkopf (5) that that becomes jet-good on the surface (10) up-irradiated that a strip of the orbital laminar members (1) becomes cleaned and the up-radiated jet-good together with the solved dirt particle aspirated that thereafter the Strahlkopf (5) around a measure, which is smaller than the width of the strip along the holding device (13) will proceed and which next strips cleaned becomes.
- 11. Verfahren nach Anspruch 10, dadurch gekennzeichnet, dass mittels des weiteren Sensors (38) die Fugen der zusammengesetzten flächigen Elemente (1) festgestellt werden und die Zuführung von Strahlgut zur Strahldüse (27) beim Ueberfahren einer Fuge kurzzeitig durch die Steuereinrichtung (35) unterbunden wird.
- 12. Process according to claim 10 or 11, characterised in that with reaching one of the wandförmigen parts (17) a first limit switch (33) a signal to the control device (35) delivers, which effected that the Strahlkopf (5) becomes rotated, until a side (29; 30) the triangular Strahlkopfes (5) parallel to the wandförmigen part (17) aligned it is and that when responding a second limit switch (32) an other method becomes along the holding device (13) toward the adjacent wandförmigen part (17) avoided.
- 13. Process according to one of claims 10 to 12, characterised in that the sucked off jet-good, which is mixed with dirt particles, which becomes mechanism the separation supplied, into which that jet-good of the dirt particles separate will and reused can become.